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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,031	11/09/2000	Ushio Iwamoto	E4604	9686

466 7590 07/03/2002

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EXAMINER

KIM, SUN U

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 07/03/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

MF5

Office Action Summary

Application No. 09/700,031	Applicant(s) Iwamoto et al.
Examiner John Kim	Art Unit 1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (e). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Nov 9, 2000
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3 6) ☐ Other: _____

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1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 is indefinite for failing to particularly point out what is a volume ratio of the spacer layer respect to. Claim 5 is indefinite for failing to particularly point out what surfaces of the structural elements that "the outermost circumferential surface" and "the inner circumferential surface" refer to.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-2, 4-5 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,748,437 (Andelmann). Andelmann teaches a filter device comprising filter material (16, 17, 21, 22) for separating components in biological liquid including blood and a sheet-like spacer layer (12, 18) of nylon woven cloth which provides improved flow of liquid wherein both end faces of the filter material are sealed liquid tightly by epoxy resin (26) and placed in a casing (34) wherein the inlet of the casing leads to the side of an exposed end part of spacer layer on an outer circumferential surface of the filter material (see col. 2, lines 10-33; col. 3, lines 22-34, 56-61; col. 4, lines 10-35; col. 4, line 54 - col. 5, line 5; col. 5, line 48 - col. 6, line 7; col. 6, line 46 - col. 7, line 11; col. 8, line 29 - col. 10, line 13; col. 12, line 48 - col. 13, line 14) and the volume ratio of the spacer layer to filter material is within the claimed range wherein the thickness of high surface area material is 25 to 300 mil and the thickness of the spacer material is 10 to 100 mil (0.254 mm - 2.54 mm) (see col. 5, lines 48-54) and the filter device is used to recover a solution passing through the filter.

6. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andelmann. Claim 3 essentially differs from Andelmann in reciting that the spacer layer thickness is not less than 0.5 mm and not more than 2.0 mm. Andelmann teaches that the thickness of the spacer material is 10 to 100 mil (0.254 mm - 2.54 mm) (see col. 5, lines 48-54). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the thickness of the spacer material of Andelmann to the claimed thickness, since it has been held

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that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Regarding claim 6, it would have been obvious to a person of ordinary skill in the art to modify the filter material of Andelmann to a leucocyte removal filter layer because the filter device is used to separate various components e.g. DNA, viruses, bacteria, cells, colloids or mixtures thereof by application of electrical field in the filter layer.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 3,668,837 and 4,606,824 and 4,551,435 and European Patent Application No. 352917 teach various filters with spirally wounded filter and spacer material.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kim whose telephone number is (703) 308-2350. The examiner can normally be reached on weekdays from 7:00 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached on (703) 308-0457. The fax phone number for official response after final action is (703) 872-9311, and the fax phone number for all other official faxes is (703) 872-9310.

When sending a draft amendment by fax, please mark the paper as "DRAFT"; otherwise, mark the paper "OFFICIAL". This will expedite the processing of the paper.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.

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John Kim

John Kim
Primary Examiner
Art Unit 1723

J. Kim
July 1, 2002